



Annual Report of Operations for Year 2018

To comply with NPDES General Permit No. WAG130000 for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of the State of Washington

Facility Name: US Fish and Wildlife Service - Willard Nat	ional Fish Hatchery
Operator Name (Permittee): Willard National Fish Hatchery	
Address: 5501-B Cook-Underwood Rd Cook, WA 98605	
Email: steve_wingert@fws.gov	Phone: 509-538-2305
Owner Name (if different from operator):	
Email:	Phone:
Best Management Practices (BMI) Has the BMP Plan been reviewed this year? Yes Does the BMP Plan fulfill the requirements of the General Summarize any changes to the BMP Plan since the last No Changes.	□ No ral Permit? ■ Yes □ No
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3/8/19 3/8/19

Operations and Production

Total harvestable weight produced in the past calendar year in pounds (lbs): 69,036 lbs
Pounds of food fed to fish during the maximum month:
9,880 lbs. during June

List the species grown or held at your facility and the annual production of each in gross harvestable weight. If fish were released rather than harvested, list the weight at time of release.

Species	Fish Produced	Receiving Water(s) to which Fish were Released	Month Released/ Spawned
Coho	45,401 lbs	Transfered to Yakama Nation Mid-Col	March, April
Fall Chinook	23,635 lbs	Little White Salmon River	Released-July
		The transfer of the second	

Fill in the table below with production numbers from the past year. List the **maximum** amount of fish on-site and the maximum amount of food fed **per month**.

Month	Total Fish (lbs)	Fish Feed (lbs)	Month	Total Fish (lbs)	Fish Feed (lbs)
January	3,697	2,508	July	35,136	5,324
February	5,312	3,134	August	21,484	6,072
March	12,440	5,764	September	25,897	4,048
April	17,026	2,992	October	32,549	6,204
May	18,983	5,456	November	36,745	3,696
June	28,290	9,880	December	30,637	1,980

Additional Comments:			2.41

Solid Waste Disposal

Describe the solid waste disposed of during the calendar year (including fish mortalities).

Type of Solid Disposed	Date Disposed	Location Disposed
Fish mortalities	year round	mort pit
Additional Comments:		

Fish Mortalities

Include a description and the dates of mass mortalities in the past year (more than 5% per week). Attach additional pages, if necessary. Include total mortalities from all causes.

Date	Cause of Deaths	Steps Taken to Correct Problem	Pounds of Fish
NA	NA	NA	NA

Additional Comments:

No mass mortality events this past year.

Noncompliance Summary

Include a description and the dates of noncompliance events (including spills), the reasons for the incidents, and the steps taken to correct the problems. Attach additional pages, if necessary.			
No noncompliance events.			

Inspections & Repairs for Production & Wastewater Treatment Systems

Date Inspected	Date Repaired	Description of System Inspected and/or Repaired
7/13/2018	NA	Visual inspection of off line settling basin

Aquaculture Drugs and Chemicals

Please indicate whether you used each drug/chemical **during the past calendar year**. Describe the use of each drug/chemical in more detail on the following pages.

Used in the past year?	Drug or Chemical	
□ Yes ■ No	Azithromycin	
□ Yes ■ No	Chloramine-T: See additional reporting requirements on page 7	
■ Yes □ No	Chlorine No Discharge, Equipment disinfection only.	
□ Yes ■ No	Draxxin	
□ Yes ■ No	Erythromycin - injectable	
□ Yes ■ No	Erythromycin - medicated feed	
■ Yes	Florfenicol (Aquaflor) Medicated feed to treat Bacterial Coldwater	
□ Yes ■ No	Formalin - 37% formaldehyde: See additional reporting requirements on page 7	
□ Yes ■ No	Herbicide - describe:	
□ Yes ■ No	Hormone - describe:	
□ Yes ■ No	Hydrogen Peroxide: See additional reporting requirements on page 7	
■ Yes □ No	lodine: See additional reporting requirements on page 7 Eyed Egg Disinfection	
□ Yes ■ No	Oxytetracycline	
□ Yes ■ No	Potassium Permanganate: See additional reporting requirements on page 7	
□ Yes ■ No	Romet	
□ Yes ■ No	SLICE (emamectin benzoate)	
□ Yes ■ No	Sodium Chloride - salt	
□ Yes ■ No	Vibrio vaccine	
□ Yes ■ No	Other: None	
□ Yes ■ No	Other: None	

Aquaculture Drugs and Chemicals (cont'd)

Describe all drug and/or chemical treatments that occurred during the year. Fill out the information below for each drug or chemical, plus page 7 for water-borne treatments. Attach additional pages as necessary.

Brand Name: Ovadine		Generic Name: lodine		
Reason for use: Disinfection	on of eyed eggs upon re	ecipt from other hatch	neries.	
☐ Preventative/Prophylactic ☐ As-needed	Total quantity of formulated product per treatment (specify units):1512 ml	Total quantity of formulated purpose (specify units): 9.07 liters	product used in past year	
Date(s) of treatment: 1/23/18, 12/03/18, 12	2/06/18, 12/14/18, 12/1	8/18, 12/27/18	Total number of treatments in past year:	
Maximum daily volume of treated water: 40 gallons	Treatment concentration (specify units): 100 ppm	Duration and frequency of trea		
Method of application:	■ Static Bath □ Flow-through	☐ Medicated Feed☐ Other (describe):		
Location in facility chemical was used (check all that apply):	☐ Raceways ☐ Incubation building	☐ Ponds ☐ Off-line settling basin	☐ Other (describe):	
Where did water treated with this chemical go? (check all that apply):	☐ Discharged w/o treatment ☐ Settling basin	☐ Septic System ☐ Publicly owned treatment works	☐ Other (describe):	
Brand Name: hth Cupor		Generic Name: Chlorinati	ing Tablete Trichlor	
	at & net disinfection in a	~40 gallon barrel	ing Tablets, Trichlor	
Danasa fan waar	Total quantity of formulated product per treatment: 24 oz.			
Reason for use: Equipmer Preventative/Prophylactic	Total quantity of formulated product per treatment:	~40 gallon barrel Total quantity of formulated p		
Reason for use: Equipmer Preventative/Prophylactic As-needed Date(s) of treatment:	Total quantity of formulated product per treatment:	~40 gallon barrel Total quantity of formulated p	Total number of treatments in past year: 12 htment(s):	
Reason for use: Equipmer Preventative/Prophylactic As-needed Date(s) of treatment: Monthly, as needed Maximum daily volume of treated water:	Total quantity of formulated product per treatment: 24 oz. Treatment concentration (specify units):	~40 gallon barrel Total quantity of formulated processing units): Duration and frequency of treating the processing treating the processing treating the processing treating treating the processing treating tr	Total number of treatments in past year: 12 htment(s):	
Reason for use: Equipmen Preventative/Prophylactic As-needed Date(s) of treatment: Monthly, as needed Maximum daily volume of treated water: 120 gallons	Total quantity of formulated product per treatment: 24 oz. Treatment concentration (specify units): 600ppm	~40 gallon barrel Total quantity of formulated processing units): Duration and frequency of treat continuous, solution Medicated Feed Other (describe):	Total number of treatments in past year: 12 htment(s):	
Reason for use: Equipmen Preventative/Prophylactic As-needed Date(s) of treatment: Monthly, as needed Maximum daily volume of treated water: 120 gallons Method of application: Location in facility chemical was used	Total quantity of formulated product per treatment: 24 oz. Treatment concentration (specify units): 600ppm Static Bath Flow-through	~40 gallon barrel Total quantity of formulated processing units): Duration and frequency of treat continuous, solution Medicated Feed Other (describe):	Total number of treatments in past year: 12 atment(s): in barrel Other (describe):	
Reason for use: Equipmer Preventative/Prophylactic As-needed Date(s) of treatment: Monthly, as needed Maximum daily volume of treated water: 120 gallons Method of application: Location in facility chemical was used (check all that apply): Where did water treated with this chemical go? (check all that apply): Provide any additional informatics	Total quantity of formulated product per treatment: 24 oz. Treatment concentration (specify units): 600ppm Static Bath Flow-through Raceways Incubation building Discharged w/o treatment	~40 gallon barrel Total quantity of formulated processify units): Duration and frequency of treat continuous, solution Medicated Feed Other (describe): Ponds Off-line settling basin discribence of the continuous of the conti	Total number of treatments in past year: 12 atment(s): in in barrel Other (describe): sinfection barrels Other (describe): evaporation/ground evention practices during use:	

Aquaculture Drugs and Chemicals (cont'd) Additional Reporting Requirements for Water-Borne Treatments

- If a water-borne treatment was used during the calendar year, Permittees must include
 detailed records/calculations as an attachment to this Annual Report in order to
 demonstrate how the maximum effluent concentrations of solution and active ingredient
 were calculated for each chemical.
- EPA recognizes that water-borne treatments may vary in the volume of the vessels treated, concentration, quantity of product, etc. Permittees must provide the information listed in the following tables for a reasonable worst case (i.e., maximum effluent concentration) scenario, not for each individual treatment.
- Permittees must submit this information and calculate the maximum effluent concentration for each water-borne chemical used during the past calendar year.
- See also Appendix D for the Chemical Log Sheet.

Static Bath Treatments		
Tank Volume	151.42	Liters
Desired Static Bath Treatment Concentration	100,000	μg/L
Volume of Product Needed	1.512	Liters Product
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	Solution: 100 ppm Active Ingredient: Ovadine is 1% active	Specify Units
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day	0 gallons	Specify Units
Maximum % of Facility Discharge Treated	0.0%, No Discharge to US water % o	f Total Discharge

Flow-Through Treatments		
Tank Volume	Liters	
Calculated Flow Rate	Liters/Minute	
Duration of Treatment	Minutes	
Desired Flow-Through Treatment Concentration of Product	μg/L	
Amount of Product to Add Initially	Liters Product	
Amount of Product to Add During Treatment	mL/Minute	
Total Volume of Product Needed	Liters Product	
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	Solution: Active Ingredient: Specify Units	
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day	Specify Units	
Maximum % of Facility Discharge Treated	% of Total Discharge	

Changes to the Facility or Operations

Describe any changes to the facility or operations since the last annual report.	
No changes to facility or operations of impact to NPDES.	
	* - *
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Signature and Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly evaluate and gather the information submitted. Based on my inquiry of the person or persons, who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed name of person signing	Title
Steve Wingert	Hatchery Manager
Applicant Signature	Date Signed 2-22-2018

Submittal Information

Send the complete, signed information, along with any attachments, to the following address:

U.S. EPA Region 10, OWW-191 Washington Hatchery Annual Report 1200 Sixth Avenue, Suite 900 Seattle, WA 98101-3140



Annual Report of Operations for Year 2017

To comply with NPDES General Permit No. WAG130000 for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of the State of Washington

NPDES # for your Facility:	
WAG130007	
Facility & Owner Informat	ion
Facility Name: US Fish and Wildlife Service - Wil	llard National Fish Hatchery
Operator Name (Permittee): Willard National Fish Hatchery	
Address: 5501-B Cook-Underwood Rd Cook, WA 98605	
Email: steve_wingert@fws.gov	Phone: 509-538-2305
Owner Name (if different from operator):	
Email:	Phone:
Best Management Practice Has the BMP Plan been reviewed this year? Does the BMP Plan fulfill the requirements of Summarize any changes to the BMP Plan sir	■ Yes □ No
No Changes.	
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JCIS 1/22/18

Operations and Production

Total harvestable weight produced in the past calendar year in pounds (lbs): 39,992 lbs

Pounds of food fed to fish during the maximum month:

6,204 lbs. during June

List the species grown or held at your facility and the annual production of each in gross harvestable weight. If fish were released rather than harvested, list the weight at time of release.

Species	Fish Produced	Receiving Water(s) to which Fish were Released	Month Released/ Spawned
Coho	11,027 lbs	Transfered to Yakama Nation Mid-Col	March & July
Fall Chinook	19,542 lbs	Little White Salmon River	Released-July

Fill in the table below with production numbers from the past year. List the **maximum** amount of fish on-site and the maximum amount of food fed **per month**.

Month	Total Fish (lbs)	Fish Feed (lbs)	Month	Total Fish (lbs)	Fish Feed (lbs)
January	7,208	396	July	25,542	2,609
February	11,030	660	August	8,066	1,144
March	12,215	1,672	September	15,728	1,892
April	9,068	4,356	October	19,080	2,772
May	17,379	5,148	November	20,207	1,936
June	26,021	6,204	December	23,596	2,068

Additional Comments:	
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Solid Waste Disposal

Describe the solid waste disposed of during the calendar year (including fish mortalities).

Type of Solid Disposed	Date Disposed	Location Disposed
Fish mortalities	year round	mort pit
	s probably with an artist	
tional Comments:		

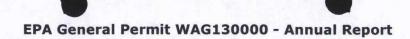
Fish Mortalities

Include a description and the dates of mass mortalities in the past year (more than 5% per week). Attach additional pages, if necessary. Include total mortalities from all causes.

Date	Cause of Deaths	Steps Taken to Correct Problem	Pounds of Fish
NA	NA	NA	NA

Additional Comments:

No mass mortality events this past year.



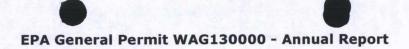
Noncompliance Summary

only the correct month/year result is generated.

Include a description and the dates of noncompliance events (including spills), the reasons for the incidents, and
the steps taken to correct the problems. Attach additional pages, if necessary.
No noncompliance events.
One monthly DMR was late due to the wrong month/year being filled out. Once the
mistake was discovered the appropriate month and year was immediately filled out and
the former one corrected back to its original data. In the future when filtering for DMR
reports to enter we will utilize the date field in addition to the permit # field to assure

Inspections & Repairs for Production & Wastewater Treatment Systems

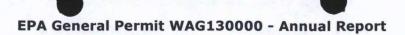
Date Repaired	Description of System Inspected and/or Repaired
NA	Visual inspection of off line settling basin



Aquaculture Drugs and Chemicals

Please indicate whether you used each drug/chemical **during the past calendar year**. Describe the use of each drug/chemical in more detail on the following pages.

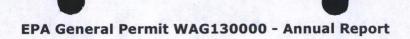
Used in the past year?	Drug or Chemical
□ Yes ■ No	Azithromycin
□ Yes ■ No	Chloramine-T: See additional reporting requirements on page 7
■ Yes □ No	Chlorine No Discharge, Equipment disinfection only.
□ Yes ■ No	Draxxin
□ Yes ■ No	Erythromycin - injectable
□ Yes ■ No	Erythromycin - medicated feed
□ Yes ■ No	Florfenicol (Aquaflor)
□ Yes ■ No	Formalin - 37% formaldehyde: See additional reporting requirements on page 7
□ Yes ■ No	Herbicide - describe:
□ Yes ■ No	Hormone - describe:
□ Yes ■ No	Hydrogen Peroxide: See additional reporting requirements on page 7
■ Yes □ No	Iodine: See additional reporting requirements on page 7 Eyed Egg Disinfection
□ Yes ■ No	Oxytetracycline
□ Yes ■ No	Potassium Permanganate: See additional reporting requirements on page 7
□ Yes ■ No	Romet
□ Yes ■ No	SLICE (emamectin benzoate)
□ Yes ■ No	Sodium Chloride - salt
□ Yes ■ No	Vibrio vaccine
□ Yes ■ No	Other: None
□ Yes ■ No	Other: None



Aquaculture Drugs and Chemicals (cont'd)

Describe all drug and/or chemical treatments that occurred during the year. Fill out the information below for each drug or chemical, plus page 7 for water-borne treatments. Attach additional pages as necessary.

Brand Name: Ovadine		Generic Name: Iodine	The second second
Reason for use: Disinfection	on of eyed eggs upon re	ecipt from other hatch	neries.
☐ Preventative/Prophylactic ☐ As-needed	Total quantity of formulated product per treatment (specify units):1512 ml	Total quantity of formulated purpose (specify units): 7.56 liters	product used in past year
Date(s) of treatment: 1/5/2017, 12/12/2017	7, 12/18/2017, 12/26/20	17, 12/29/2017	Total number of treatments in past year:
Maximum daily volume of treated water: 40 gallons	Treatment concentration (specify units): 100 ppm	Duration and frequency of trea 20 min. one time up	
Method of application:	■ Static Bath □ Flow-through	☐ Medicated Feed ☐ Other (describe):	A Comment
Location in facility chemical was used (check all that apply):	☐ Raceways ☐ Incubation building	☐ Ponds ☐ Off-line settling basin	☐ Other (describe):
Where did water treated with this chemical go? (check all that apply):	☐ Discharged w/o treatment ☐ Settling basin	☐ Septic System ☐ Publicly owned treatment works	☐ Other (describe):
	water flows to off line se		
Brand Name: hth Super		Generic Name: Chlorinati	ng Tablets, Trichlor
	it & net disinfection in a		ng Tablets, Trichlor
	t & net disinfection in a Total quantity of formulated product per treatment: 24 oz.		
Reason for use: Equipmen	Total quantity of formulated product per treatment:	~40 gallon barrel	
Reason for use: Equipmen Preventative/Prophylactic As-needed Date(s) of treatment:	Total quantity of formulated product per treatment:	~40 gallon barrel	Total number of treatments in past year: 12 tment(s):
Reason for use: Equipmen Preventative/Prophylactic As-needed Date(s) of treatment: Monthly, as needed Maximum daily volume of treated water:	Total quantity of formulated product per treatment: 24 oz. Treatment concentration (specify units):	~40 gallon barrel Total quantity of formulated p (specify units): 288 02	Total number of treatments in past year: 12 tment(s):
Reason for use: Equipmen Preventative/Prophylactic As-needed Date(s) of treatment: Monthly, as needed Maximum daily volume of treated water: 120 gallons	Total quantity of formulated product per treatment: 24 oz. Treatment concentration (specify units): 600ppm Static Bath	~40 gallon barrel Total quantity of formulated properties (specify units): **Duration and frequency of treation continuous, solution** Medicated Feed Other (describe): Ponds	Total number of treatments in past year: 12 tment(s):
Reason for use: Equipmen Preventative/Prophylactic As-needed Date(s) of treatment: Monthly, as needed Maximum daily volume of treated water: 120 gallons Method of application: Location in facility chemical was used	Total quantity of formulated product per treatment: 24 oz. Treatment concentration (specify units): 600ppm Static Bath Flow-through	~40 gallon barrel Total quantity of formulated properties (specify units): **Duration and frequency of treation continuous, solution** Medicated Feed Other (describe): Ponds	Total number of treatments in past year: 12 tment(s): in barrel Other (describe):



Aquaculture Drugs and Chemicals (cont'd) Additional Reporting Requirements for Water-Borne Treatments

- If a water-borne treatment was used during the calendar year, Permittees must include detailed records/calculations as an attachment to this Annual Report in order to demonstrate how the maximum effluent concentrations of solution and active ingredient were calculated for each chemical.
- EPA recognizes that water-borne treatments may vary in the volume of the vessels treated, concentration, quantity of product, etc. Permittees must provide the information listed in the following tables for a reasonable worst case (i.e., maximum effluent concentration) scenario, not for each individual treatment.

Static Bath Treatments

- Permittees must submit this information and calculate the maximum effluent concentration for each water-borne chemical used during the past calendar year.
- See also Appendix D for the Chemical Log Sheet.

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Tank Volume	151.42	Liters
Desired Static Bath Treatment Concentration	100,000	μg/L
Volume of Product Needed	1.512	Liters Product
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	Solution: 100 ppm Active Ingredient: Ovadine is 1% active	+ Specify Units
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day	0 gallons	Specify Units
Maximum % of Facility Discharge Treated	0.0%, No Discharge to US water % of Total Discharge	
Flow-	Through Treatments	
Tank Volume	Liters	
Calculated Flow Rate	Liters/Minute	
Duration of Treatment		Minutes
Desired Flow-Through Treatment Concentration of Product		μg/L
Amount of Product to Add Initially	Liters Product	
Amount of Product to Add During Treatment	mL/Minute	
Total Volume of Product Needed		Liters Product
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	Solution: Active Ingredient:	Specify Units
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day		Specify Units
Maximum % of Facility Discharge Treated		

% of Total Discharge

Changes to the Facility or Operations

Describe any changes to the facility or operations since the last annual report.
No changes to facility or operations of impact to NPDES.

Signature and Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly evaluate and gather the information submitted. Based on my inquiry of the person or persons, who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed name of person signing	Title
Steve Wingert	Hatchery Manager
Applicant Signature	Date Signed 1-19-2018

Submittal Information

Send the complete, signed information, along with any attachments, to the following address:

U.S. EPA Region 10, OWW-191 Washington Hatchery Annual Report 1200 Sixth Avenue, Suite 900 Seattle, WA 98101-3140